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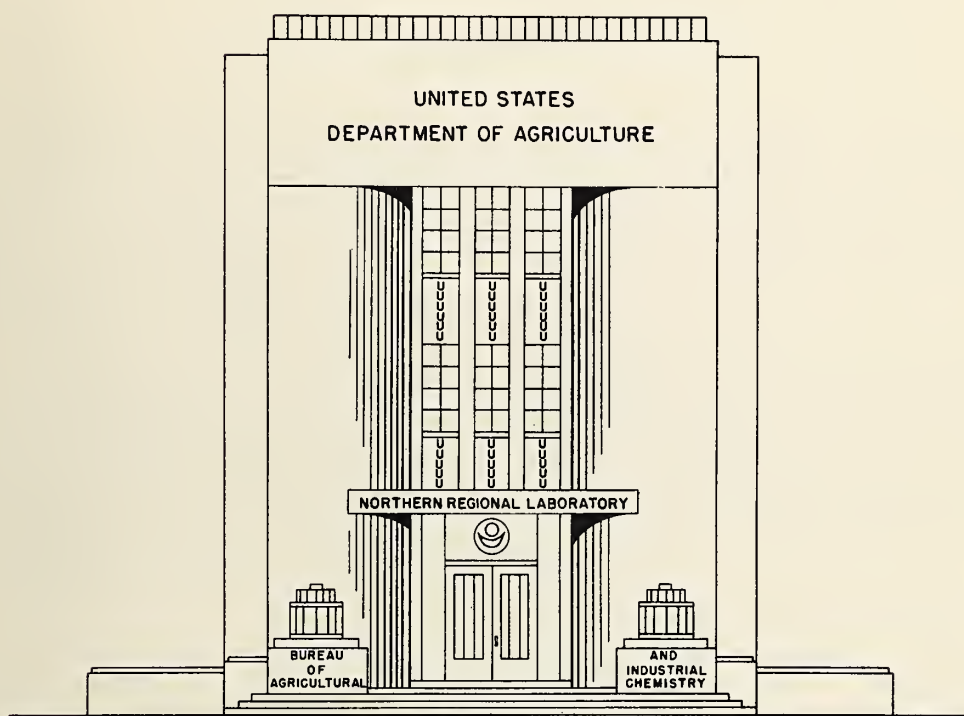


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UNITED STATES DEPARTMENT OF AGRICULTURE
Agricultural Research Administration
Bureau of Agricultural and Industrial Chemistry

✓ BLOOD AND BLOOD PLASMA SUBSTITUTES,

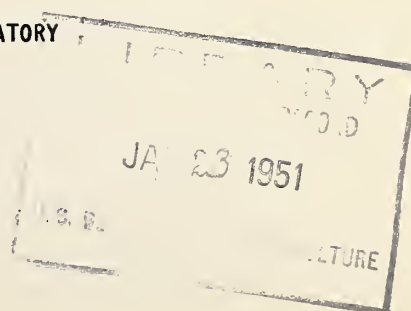
A Selected Bibliography, Including
Literature and Patent References ✕



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BLOOD AND BLOOD PLASMA SUBSTITUTES

A Selected Bibliography, Including Literature and Patent References

By

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INTRODUCTION

This selected bibliography has been compiled to assist in studying the problem of blood and blood plasma substitutes. It cites articles from a variety of sources and on a variety of subjects, including several on blood and blood plasma. In citing such articles the purpose has been to include those relating to transfusion, preservation, fractionation, and modification of blood and its constituents to afford a more comprehensive review.

Although the bibliography is devoted principally to articles on the various substances which have been studied as materials that may be injected into the circulatory system to take the place of and/or perform some of the functions of blood, it includes several articles of a general or editorial nature. It also contains, at the end, a guide list of many of the cited articles under designated headings. The author has drawn heavily upon the excellent bibliography on blood substitutes compiled by the Army Medical Library³.

Attention is called to the various reports that have been issued by the National Research Council, Division of Medical Sciences, Committee on Blood Substitutes, National Research Council Building, Washington, D. C. These reports contain a wealth of material on the subject and should be consulted as an essential part of the available literature on blood substitutes.

¹ Technical Analyst, Northern Regional Research Laboratory. .

² One of the laboratories of the Bureau of Agricultural and Industrial Chemistry, Agricultural Research Administration, U. S. Department of Agriculture.

³ Blood substitutes. Army Medical Library, Reference Division, Washington, D. C.. Issued January 6, 1949. (Mimeographed)

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METHOD FOR THE CRYSTALLIZATION OF ALBUMIN AND THE PREPARATION
OF PROTEIN PRODUCTS THEREFROM. U. S. 2,433,905.
Jan. 6, 1948.
Directed principally for obtaining protein fractions from blood.
- KNOTT, EMMET K. (215)
METHOD AND MEANS FOR IRRADIATING BLOOD. U. S. 2,308,516.
Jan. 19, 1943.
Especially freshly withdrawn blood from a patient, to be returned
to the circulatory system after irradiation.
- MITCHUM, ELISABETH E. (216)
BLOOD-SEPARATING MACHINE FOR SERUM PRODUCTION. U. S. 2,343,694.
Mar. 7, 1944.
- NESSET, NAURICE M. (BAXTER LABORATORIES, INC.) (217)
TREATMENT OF BLOOD. U. S. 2,390,727.
Dec. 11, 1945.
Separation of plasma from blood cells.
- NOVAK, M. (218)
DISPOSABLE FILTER FOR BLOOD AND PLASMA TRANSFUSIONS. U. S.
2,341,114.
Feb. 8, 1944.
To remove fibrin and gelatinous material from stored blood and
plasma.
- PARFENTJEV, IVAN A. (LEDERLE LABORATORIES, INC.) (219)
BLOOD CLOTTING ACCELERATOR. U. S. 2,369,111.
Feb. 6, 1945.
Globulin fractions of blood plasma possessing strong clotting
properties.
- (LEDERLE LABORATORIES, INC.) (220)
TREATMENT OF BLOOD. U. S. 2,281,990.
May 5, 1942.
Separation of plasma from blood cells.
- (LEDERLE LABORATORIES, INC.) (221)
PRODUCTION OF PLASMA. U. S. 2,281,989.
May 5, 1942.
Separation of plasma from blood cells.
- REICHEL, JOHN (SHARP & DOHME, INC.) (222)
CONTAINER WITH LYOPHILIC BIOLOGICALLY-ACTIVE SUBSTANCES, Etc.
U. S. 2,085,392.
June 29, 1937.
Sealed glass container for lyophilic serum.

- REIMANN, ALBERT (HALL LABORATORIES, INC.) (223)
METHOD OF PROCESSING BLOOD. U. S. 2,241,868.
May 13, 1941.
Separation of plasma from blood cells.
- SAHYUN, MELVILLE (STERLING DRUG, INC.) (224)
PHARMACEUTICAL SOLUTION. U. S. 2,411,897.
Dec. 3, 1946.
A stabilized aqueous solution of amino acids by hydrolysis of casein for injection into the human body.
- SCUDDER, JOHN (CHARLES R. DREW) (225)
APPARATUS FOR PRESERVING BLOOD. U. S. 2,301,710.
Nov. 10, 1942.
Vessel has a restricted area at the interface between plasma and blood cells.
- SMITH, HARRY P. and SEEGER, WALTER H. (PARKE, DAVIS & COMPANY) (226)
PROCESS FOR OBTAINING PRODUCTS DERIVED FROM BLOOD. U. S. 2,394,566.
Feb. 12, 1946.
Method for obtaining prothrombin from blood plasma.
- STRUMIA, MAX M. and CHORNOCK, FRANCIS W. (THE JOHN S. SHARPE (227)
RESEARCH FOUNDATION OF THE BRYN MAWR HOSPITAL)
MODIFIED GLOBIN AND METHOD FOR ITS PREPARATION. U. S. 2,460,550.
Feb. 1, 1949.
Alkaline modification to reduce molecular weight.
- TURNER, CHARLES WESLEY and REINEKE, EZRA PAUL (AMERICAN (228)
DAIRIES, INC.)
THYROPROTEIN AND METHOD OF MAKING THE SAME. U. S. 2,329,445.
Sept. 14, 1943.
Artificial thyroprotein by iodinating milk or blood proteins.
- WILLIAMS, JOHN W. and DEUTSCH, HAROLD F. (SECRETARY OF WAR) (229)
PROCESS FOR SEPARATING AND RECOVERING GLOBULINS FROM BLOOD PLASMAS. U. S. 2,520,076.
Aug. 22, 1950.
- _____ and DEUTSCH, HAROLD F. (SECRETARY OF WAR) (230)
PROCESS OF RECOVERING GAMMA GLOBULINS FROM HUMAN BLOOD SERUM.
U. S. 2,437,060.
Mar. 2, 1948.

- WRETTLIND, KARL ARVID JOHANNES (231)
MANUFACTURE OF AMINO ACID PREPARATIONS INTENDED FOR INTRAVENOUS
SUPPLY OF NUTRIENTS. U. S. 2,433,879.
Jan. 6, 1948.
Amino acid-polypeptide mixtures purified by dialysis.
- DAMSCHRODER, RUDOLPH E. and GATES, JOHN W., JR. (232)
METHYLATED DERIVATIVES OF GELATIN. Abandoned application Ser.
No. 768,483.
July 19, 1949.
- WILLIAMS, JOHN W. and others (SECRETARY OF WAR) (233)
PURIFIED HUMAN SERUM GAMMA GLOBULIN. Abandoned application
Ser. No. 623,796.
Sept. 20, 1949.
Reducing viscosity and reducing molecular size by enzymatic
digestion.
- ACTIEBOLAGET PHARMACIA (234)
IMPROVEMENTS IN OR RELATING TO THE DEGRADATION OF DEXTRAN.
British 583,378.
Dec. 17, 1946.
- JOHNSON, JAMES YATE (I. G. FARBENINDUSTRIE) (235)
IMPROVEMENTS IN THE PREPARATION OF BLOOD SERUM FOR DIAGNOSTIC
PURPOSES. British 440,558.
Dec. 24, 1936.
Serum improved by removing heat-precipitated solids.
- KEKWICK, RALPH AMBROSE and others (LISTER INSTITUTE OF (236)
PREVENTIVE MEDICINE)
IMPROVED PROCESS FOR THE FRACTIONATION OF BLOOD PLASMA. British
603,998.
1948.
Includes removal and purification of fibrinogen and prothrombin.
- LEDERLE LABORATORIES, INC. (237)
PREPARATION OF THERAPEUTIC SERA. British 576,476.
April 5, 1946.
Removal of unstable elements from blood plasma.
- VORSCHÜTZ, JOSEF (238)
IMPROVEMENTS IN AND RELATING TO THE PRODUCTION OF THERAPEUTIC
REMEDIES. British 469,447.
July 21, 1937.
Blood as a nutritive substrate for remedies produced by
fermentation.

- LAMPERT, H., et al. (239)
(BLOOD-SUBSTITUTE FLUID). German 710,994.
August 21, 1941.
Alkaline hemin solution and protective colloid such as
neutralized gelatin.
- LOEWE, SIEGFRIED (240)
VERFAHREN ZUR GEWERBLICHEN HERSTELLUNG UND REINIGUNG VON
ZUBEREITUNGEN EINES WIRKSTOFFES. German 655,140.
Jan. 10, 1938.
Extraction of hormones from animal or human blood, lymph, serum
or urine.
- TURON, GESELLSCHAFT (241)
VERFAHREN ZUR ERHOHUNG DER GERINNUNGSFAHIGKEIT VON TIERISCHEM
BLUT. German 662,409.
Aug. 6, 1938.
Coagulation of animal blood increased by the addition of
electrolytes and pectin.
- WEESE, HELMUT and others (I. G. FARBENINDUSTRIE) (242)
VERFAHREN ZUR HERSTELLUNG VON ALS BLUTFLUSSIGKEITSERSATZ
BRAUCHBAREN INFUSIONSLOSUNGEN. German 738,994.
Sept. 7, 1943.
Blood plasma substitute for infusions, by adding polyvinyl-
pyrrolidone to a physiological salt solution.
- LAMPERT, H. and LIESGANG, R. E. (243)
LIQUID SUBSTITUTE FOR BLOOD. Belgian 446,238.
July 31, 1942.
Alkaline solution of hemin and a protective colloid, used as a
liquid substitute for blood.
- FISCHER, ROGER (244)
PROCEDE DE PREPARATION D'UNE SUBSTANCE BACTERICIDE. Swiss 203,886.
July 1, 1939.
A new chemical compound, valuable for preserving human and
animal blood for transfusion.
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- (245)
PROCEDE DE PREPARATION D'UNE SUBSTANCE BACTERICIDE. Swiss 201,766.
Mar. 1, 1939.
New chemical compound for preservation of human and animal blood
for transfusions.

SCHWEIZ SERUM AND IMPFINSTITUTE (246)
DEHYDRATED WATER-SOLUBLE SERUM AS BLOOD SUBSTITUTE. Swiss 224,068.
Oct. 31, 1942.

Dehydrated water-soluble serum as blood substitute. Serum containing 10 percent by weight of carbohydrate is evaporated to dryness.

FARBENINDUSTRIE, I. G. (247)
FREMGANGSMAADE TIL FREMSTILLING AF SOM BLODVAEDSKEERSTATNING
BRUGBARE INFUSIONSOPLOSNINGER (Process for producing blood
liquid substitutes useful for infusion solutions). Danish
61,379.
Oct. 4, 1943.

